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Brood hosts of Oriental Cuckoo *Cuculus saturatus* in Sabah, Malaysia

by Robert G. Moyle, Alim Biun, Benedict Butit & David Sumpngol

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Wells & Becking (1975) and Becking (1975) used several lines of evidence to examine the specific affinity of a race of *Cuculus* resident in Malaya, Sumatra, Java, and the Lesser Sundas. Plumage, bill and eggshell structure, vocalizations, and brood hosts indicated that this race (*lepidus*) was a subspecies of Oriental Cuckoo *Cuculus saturatus* and not a subspecies of Lesser Cuckoo *Cuculus poliocephalus*, as previously believed. Because of incomplete data, a Bornean form (*insulindae*) was

only tentatively transferred from *C. poliocephalus* to *C. saturatus*. Wells (1982) used vocalizations from Mt. Kinabalu, Sabah, to support this decision. At that time no brood hosts were known for the Bornean form.

During May 1999 at Kinabalu National Park, the authors observed juvenile *Cuculus* cuckoos on a nest or being tended by host parents. The brood hosts in all observations were either Mountain Leaf Warbler *Phylloscopus trivirgatus* or Yellow-breasted Warbler *Seicercus montis*. All observations were within 1 km of the park headquarters and c. 1,600 m above sea level. On 20 April 1999, a Mountain Leaf Warbler nest was found that contained one large brown-spotted, chalk-white cuckoo egg (19 x 10 mm) in addition to two of the host's eggs. Although an egg with these dimensions is extremely long and narrow, *C. saturatus* eggs are quite variable in size and shape. Becking (1975) measured six eggs of *C. s. lepidus* and found average dimensions of 21.1 x 13.7 mm. However, Madoc (1956) collected two eggs at Fraser's Hill in Malaysia that were much closer to the dimensions we observed (19.0 x 11.8 mm and 18.2 x 11.3 mm).

The nest was a shallow cave in a trail embankment that measured 39 cm in diameter, 35.5 cm in height and was lined with dried leaves. All three eggs were present until 3 May 1999, when the cuckoo egg hatched and the other two eggs were found on the ground near the nest. The juvenile was dark brown, weighed 3 g, and was fed by at least one Mountain Leaf Warbler. By 17 May, the juvenile was covered in a grey plumage with dark banding and was identified as *Cuculus saturatus*. The juvenile had fledged by 22 May. Several sightings of Mountain Leaf Warblers feeding fledgling cuckoos in the vicinity of the nest in late May were presumed to be this individual.

When Yellow-breasted Warblers were observed as brood hosts, single fledglings were being fed by a pair of adults. These observations occurred on 25, 26, and 28 May. The juvenile cuckoo sat motionless for long periods of time. Upon return of a host parent to the area the juvenile began a thin, high begging call and was quickly fed. We are uncertain if the three separate observations of Yellow-breasted Warbler as a brood host are independent because the sightings were within a four day span and within 0.5 km of each other. During late May in Kinabalu Park, adult Oriental Cuckoos were quite abundant. Individuals were observed on two occasions and the "boop, boop-boop" calls described by Wells (1982) were heard throughout the day.

The plumage of the juvenile cuckoos is not consistent with any other cuckoos in the mountains of Borneo and agrees with Becking's (1975) description of *C. s. lepidus*. The underparts of the Kinabalu birds were barred, not streaked. The upperparts were dark with lighter bars, more brownish than grey on the wings. The entire head was barred to varying degrees, most distinctly on the crown. The crown feathers were often puffed out, making the head appear quite large. There was no plumage eye-ring, but the eyelid colour was lighter than surrounding plumage. The tail was short, lightly barred and tipped with white. Tarsi and toes were a light pinkish orange and irides were dark brown. The gape on the nestling was a bright reddish orange. Large Hawk Cuckoo *Hierococcyx sparveroides* is the only other cuckoo found close to this altitude in the Bornean mountains that is liable to cause identification problems

(Sheldon *et al.* 2001). However, Large Hawk Cuckoo juveniles have streaked, not barred, underparts. Photographs of the Oriental Cuckoos on the Mountain Leaf Warbler nest and being fed by Yellow-breasted Warblers were taken by RGM and support this identification.

Mountain Leaf Warbler was mentioned as a brood host for *C. s. lepidus* (Becking 1975) from Java, and from Borneo by Hitoshi *et al.* (1996). There has been one other description of a juvenile cuckoo close to Kinabalu Park Headquarters (Phillipps 1970). This bird was identified tentatively as either a Large Hawk Cuckoo or Hodgson's Hawk Cuckoo *Hierococcyx fugax*. The description (speckled black and white) is vague, but it is conceivable that this was in fact a juvenile Oriental Cuckoo.

Mountain Leaf Warbler and Yellow-breasted Warbler are not unexpected brood hosts for a resident race of Oriental Cuckoo on Borneo. *Phylloscopus* and *Seicercus* warblers are well known as hosts for Oriental Cuckoo throughout its range (Table 1). In contrast, although a variety of hosts has been reported (see Payne 1997), Lesser Cuckoo generally parasitizes the nests of *Cettia* species. The two host species that we observed are the only representatives of their genera that breed in montane forests of Borneo. Sunda Bush Warbler *Cettia vulcania* is resident above 1,500 m on Mt. Kinabalu, but there are no records of it being the object of nest parasitism. These observations of brood hosts add further support to the Wells (1982) and Wells and Becking (1975) decision to place this Bornean cuckoo as a subspecies of *C. saturatus*.

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TABLE 1

Brood Hosts of Oriental Cuckoo and Lesser Cuckoo

Taxon	Region	Hosts	Source
<i>Cuculus poliocephalus</i> ¹	Himalayas, Myanmar	<i>Cettia fortipes</i>	Becking (1981)
	Sikkim	<i>Cettia pallidipes</i>	Becking (1981)
	Amur, Japan	<i>Cettia diphone</i>	Neufeldt (1971, in Becking 1981) Yamashina (1961)
<i>Cuculus saturatus</i>	Kashmir	<i>Phylloscopus occipitalis</i>	Becking (1981)
	Himalayas	<i>Phylloscopus reguloides</i>	Becking (1981)
<i>C. s. lepidus</i>	Malaya	<i>Seicercus castaniceps</i>	Madoc (1956)
	Java	<i>Seicercus grammiceps</i>	Becking (1975)
<i>C. s. insulindae</i>	Borneo	<i>Phylloscopus trivirgatus</i>	Becking (1975)
		<i>Seicercus montis</i>	this paper
		<i>Phylloscopus trivirgatus</i>	this paper Hitoshi <i>et al.</i> (1996)

¹ see Payne (1997) for other possible hosts.

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A review of the neotropical nightjar species group *Caprimulgus maculosus*, *C. nigrescens* and *C. whitelyi*

by Johan Ingels

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Three South American nightjars, the Cayenne Nightjar *Caprimulgus maculosus*, the Blackish Nightjar *C. nigrescens* and the Roraiman Nightjar *C. whitelyi*, form a species group. The Blackish Nightjar is widespread throughout the Amazon basin and the Guianan plateau. Ingels & Ribot (1983), Ingels *et al.* (1984) and Roth (1985) have documented its life history in Suriname and southwestern Brazil respectively. Both the other nightjars have a very limited distribution (Cleere 1998). The Cayenne Nightjar is known from one specimen only, a male collected in French Guiana. The Roraiman Nightjar is restricted to the subtropical zone of the Pantepuí region in the border area